

REMARKS

Claims 1-23 are all the claims currently pending in this Application. With this Amendment, claims 1, 5, 7, 11, 13, 19, 20, 21, and 22 are amended. These amendments are fully supported in the originally filed Application. Entry of these amendments is respectfully requested.

Allowed and Allowable Claims

The Examiner maintains that claims 18 and 23 are allowed and that claims 2, 6, 8, 12, and 14 include allowable subject matter and would be allowed if rewritten into independent form. Applicants respectfully request that the rewriting of these claims be held in abeyance at this time.

Prior Art

Claims 1, 5, 7, 11, and 19-22 are rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Henry (U.S. Patent 7,058,059). Claims 3, 4, 9, 10, 13, and 15-17 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Henry. Applicants respectfully traverse these rejections.

Applicants submit that Henry fails to disclose or reasonably suggest “an encapsulation means for encapsulating the wireless LAN signal in OSI layer 2 by providing the wireless LAN signal with a header having its own terminal’s MAC address as an originating MAC address and a wireless LAN base station’s MAC address as a destination MAC address, such that the encapsulated wireless LAN signal includes at least two headers, each including an originating

MAC address and a destination MAC address”, as recited in independent claim 1. Analogous limitations are recited in independent claims 5, 13, 19, 20, 21, and 22.

Specifically, Applicants noted that the encapsulation described in Henry is executed *in the third layer of the OSI model*. That is, *an IP packet is encapsulated by another IP packet*. This results in an encapsulated packet having *two* IP headers and *only one* header with an originating MAC address and a destination MAC address.

Regarding the encapsulation

Regarding the encapsulation, in the Advisory Action, the Examiner asserts that “Henry discloses encapsulation of a received WLAN signal by having the device’s MAC address as the originating MAC address and the access point’s MAC address as the destination MAC address (see fig. 9, col. 12, lines 13-25).” However, there is a difference between encapsulating an IP signal *in the OSI layer 3*, and then, as conventionally, adding *a single WLAN frame* in OSI layer 2 (i.e. adding a WLAN frame to an IP-in-IP packet, as in Henry) and encapsulating a WLAN packet *in another WLAN frame* (i.e. adding *another* WLAN frame to a WLAN packet already having an originating MAC address and a destination MAC address, as in the claims of the present invention).

As noted by the Examiner, the encapsulation in Henry is described in col. 12: MAC_{NIC}, MAC_{AP} [IP_{MH@AN}, IP_{RAS@ON} [IP_{MH@ON}, IP_{DST@ON}, IP PAYLOAD]]. This is read as IP_{MH@ON}, IP_{DST@ON}, and IP PAYLOAD are encapsulated. This is also expressed in table 916 of Figure 9 of Henry, which the Examiner also refers to:

MAC _{NIC}	MAC _{AP}
IP _{MH@AN}	IP _{RAS@ON}
IP _{MH@ON}	IP _{DST@ON}
IP PAYLOAD	

Thus, in accordance with the encapsulation *in OSI layer 3* as described in Henry, the resultant packet has a header including *two* IP source addresses and *two* IP destination addresses because the encapsulation takes place in the IP layer (OSI layer 3). The single MAC source address and single MAC destination address in the resultant packet are those MAC addresses which are conventionally added to the packet in the data layer (OSI layer 2). There is no encapsulation in the data layer of a packet *already having a MAC source address and a MAC destination address*, so there is no second MAC source address or second MAC destination address.

On the other hand, as recited in the independent claims, the encapsulation of the claimed embodiments of the present invention is *an encapsulation of a wireless LAN signal executed in OSI layer 2*. That is, a packet in the second layer, already including a MAC address and MAC payload, is encapsulated and another MAC address is added, so that the resultant encapsulated packet has at least two headers, “each including an originating MAC address and a destination MAC address”. Using the expression of Henry, this could read: MAC₁, MAC₂ [MAC₃, MAC₂,

MAC PAYLOAD]. Alternately, in table form, as used in Henry, the encapsulation described in the claims of the present invention could be shown as:

MAC ₁	MAC ₂
MAC ₃	MAC ₂
IP ₃	IP ₂
MAC PAYLOAD	

Thus, in accordance with the encapsulation *in OSI layer 2* as in the present invention, the resultant packet has a header including *two* MAC source addresses and *two* MAC destination addresses because the encapsulation takes place in the data link layer (OSI layer 2). The single IP source address and single IP destination address in the resultant packet are those IP addresses which are conventionally added to the packet in the IP layer (OSI layer 3). The encapsulation is in OSI layer 2, and therefore, a packet that *already* has MAC addresses in the header is encapsulated with *additional* MAC addresses in the header.

Regarding the packet being encapsulated

In addition to the above, Applicants note that the presently-claimed invention recites encapsulating a *wireless LAN signal*. As noted above, this means encapsulating a packet that *already* has an originating MAC address and a destination MAC address. In contrast, in Henry, the encapsulation is of an IP packet.

According to Henry, an “intelligent device” is used to enable communication between a mobile host, which transmits and receives IP data, and a WLAN access point. The intelligent device appears, from the point of view of the access point, to access the network like any other IP host connected to the network though a physical network interface device. (Abstract) In order

to achieve this, when data is transmitted from the mobile host to the access point, IP packets from the mobile host are extracted, at the intelligent device, from an Ethernet frame and encapsulated with IP headers, and then with MAC headers. Thus, even to the extent that MAC headers are being appended to data, it is *IP packets* that are being encapsulated, *not* wireless LAN signals, as recited in the claims of the present invention. This is evident from Figure 9 which illustrates that there is no packet that *already has* a MAC source address and a MAC destination address, that is encapsulated with *another* MAC source address and *another* MAC destination address.

Applicants respectfully request that the prior art rejections be reconsidered and withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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